

ABSTRACT OF THE DISCLOSURE

A system comprises a first processor, a second processor coupled to the first processor, an operating system that executes exclusively only on the first processor and not on the second processor, and a middle layer software running on the first processor and that distributes tasks to 5 run on either or both processors. A synchronization unit coupled to the first and second processors also may be provided to synchronize the processors. Further still, a translation lookaside buffer may be included that is shared between the processors. Each entry in the translation lookaside buffer (“TLB”) may include a task identifier to permit the operating system or middle layer software to selectively flush only some of the TLB entries (e.g., the entries 10 pertaining to only one of the processors).